

North Idaho Air Quality Summary – July 2011

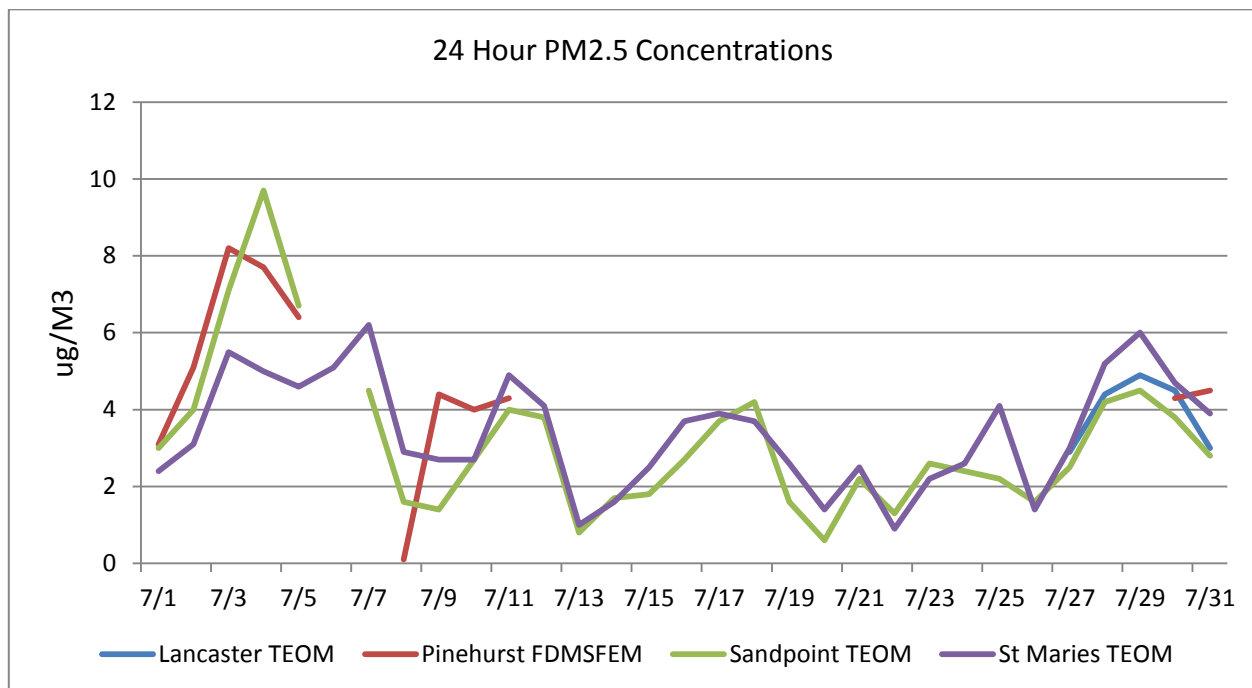
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This summary of North Idaho's air quality is compiled from the various air quality samplers located in the Department of Environmental Quality's Coeur d'Alene Region for the month of July 2011.

The Coeur d'Alene Regional Network encompasses the counties of Boundary, Bonner, Kootenai, Shoshone, and Benewah. The data presented in this report is considered preliminary data and has not been completely evaluated for all quality assurance requirements.

PM_{2.5} CONTINUOUS DATA

The graph below displays the averaged daily 24-hour PM_{2.5} values for the month and is expressed in micrograms per cubic meter, ($\mu\text{g}/\text{m}^3$). These values were calculated by averaging hourly values midnight to midnight from the agency's PM_{2.5} TEOM samplers located in the Cities of Pinehurst, Sandpoint, and St. Maries and on Lancaster Road in Kootenai County.



The PM_{2.5} continuous samplers located in Pinehurst and at the Lancaster Road site did not meet data completeness goals for July. The FDMS sampler in Pinehurst had a mechanical problem with a drier component. After installing some replacement gaskets and reconfiguring the connections the unit was brought back online. The Lancaster TEOM did not pass a monthly flow check. Such a failure requires that the data be invalidated back to the last successful flow check. The last successful flow check for this sampler was conducted June 27, 2011.

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The table below shows the maximum 24 hour values calculated from continuous TEOM monitoring for this reporting period. The National Ambient Air Quality Standard (NAAQS) for PM_{2.5} is 35 µg/m³. Recently, the U.S. EPA approved the TEOM-FDMS as a Federal Equivalent Method (FEM) for the collection and reporting of PM_{2.5} data. In January 2011 the Coeur d'Alene Regional Office (CRO) began using a TEOM-FDMS equivalent method for NAAQS reporting from the Pinehurst monitoring station. The CRO still uses Federal Reference Method (FRM) filter based sample measurements at the St. Maries monitoring site to determine NAAQS compliance. Depiction of preliminary continuous monitoring data in the table below is for reporting purposes only.

Region	Highest Reading	Date
Kootenai TEOM	4.9	July 29
Pinehurst TEOM-FDMS	8.2	July 3
Sandpoint TEOM	9.7	July 4
St. Maries TEOM	6.2	July 7

PM_{2.5} FEDERAL REFERENCE METHOD (FRM) DATA

At this time the Coeur d'Alene Regional Office of Idaho DEQ uses the Federal Reference Method Sampler (filter based) measurements and for NAAQS compliance determination at the St. Maries monitoring site. This method requires that 75% of available data be collected per quarter. Other filter processing requirements are applicable to this method. The Coeur d'Alene Regional Office's collection efficiency rate for June is shown in the table below. The FRM filters at the Pinehurst site are used for quality assurance purposes.

July FRM filter recovery Efficiency

Site	Sample Days	Valid Samples	Collection Percentage
Pinehurst	5	13	100%
Pinehurst Precision	5	5	100%
St. Maries	5	5	100%

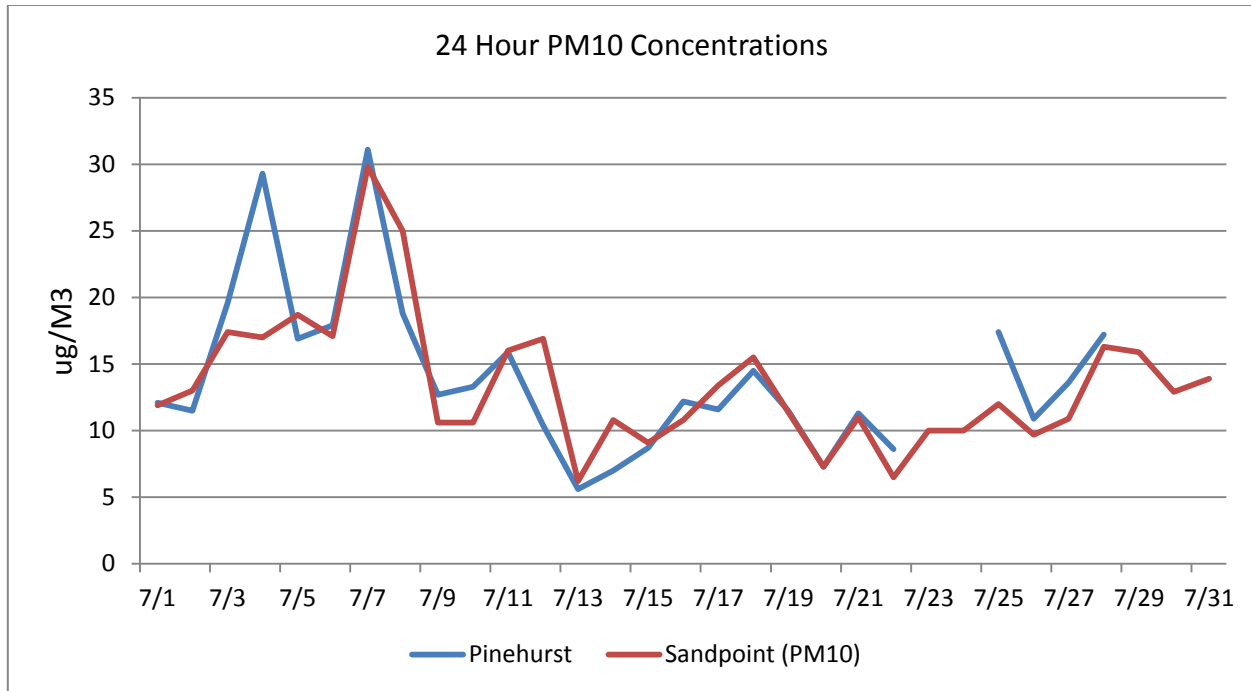
Because of the failure of the continuous PM 2.5 sampler in Pinehurst, the Pinehurst FRM was temporarily switched to a 1/1, or a daily, sampling schedule. This is the reason for the larger number of valid samples than planned samples. The FRM was returned to its normal 1/6, or every six day, schedule after the FDMS was brought back online.

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PM10 CONTINUOUS DATA

The graph below shows the 24 hour values for PM10. No apparent exceedances of the 150 $\mu\text{g}/\text{m}^3$ standard have occurred over this reporting period.



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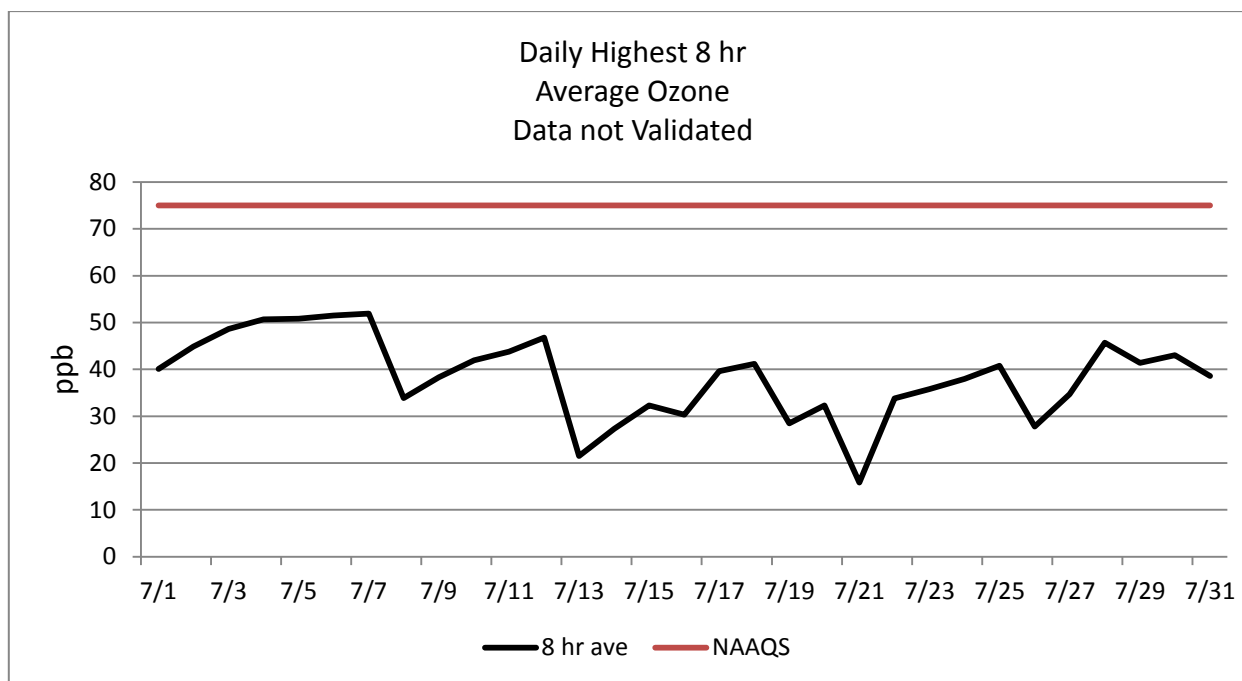
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OZONE DATA

Ozone monitoring in the Coeur d'Alene area began on April 1 and will continue through September 30. This time period is the accepted ozone season for the northern latitudes of the lower 48, and is determined to be the part of each year when ozone formation has the potential to exceed the NAAQS. Ozone formation is enhanced by the presence of temperatures near or above 30 degrees Celsius (86 degrees Fahrenheit), and intense sunlight.

The federal standard (NAAQS) for ozone of 0.075 ppm (or 75 ppb) is based upon a 3-year average of the annual 4th-highest daily maximum 8-hour average. The figure below is used only to illustrate how ozone levels relate to the standard, and do not indicate determination of whether the NAAQS was exceeded.

Reminder: All data used in this report is preliminary data. This means that the data has been screened by regional air quality personnel but has not been through the complete quality assurance process prior to submittal to EPA.



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NETWORK INFORMATION

The table below summarizes all active and inactive air quality samplers located within the North Idaho area during the month of July 2011.

Site	Monitor	Type	Comments	Current Status	Data Completeness
Lancaster / Rathdrum Prairie	API 200E Nitrogen Oxides analyzer	Continuous	Seasonal	Active	98%
Lancaster / Rathdrum Prairie	API 400 Ozone (O3) analyzer	Continuous	Seasonal	Active	98%
Lancaster / Rathdrum Prairie	R&P 1400A TEOM PM2.5	Continuous	Quality assurance failure (failed flow check) led to low data completeness.	Active	17%
Lancaster / Rathdrum Prairie	Meteorological Tower	Continuous		Active	99%
St. Maries	R&P 1400AB TEOM PM2.5	Continuous		Active	97%
St. Maries	Thermo Model 2025 FRM PM2.5	Filter		Active	100%
Pinehurst	R&P 8500 FDMS TEOM PM2.5	Continuous	Mechanical failure led to low data completeness.	Active	38%
Pinehurst	Thermo Model 2025 FRM PM2.5	Filter		Active	100%
Pinehurst	R & P Model 2025 FRM PM2.5	Filter	Precision	Active	100%
Pinehurst	R&P 1400AB TEOM PM10	Continuous		Active	89%
Pinehurst	Meteorological Tower	Continuous		Active	100%
Sandpoint U of I Extension Office	Meteorological Tower	Continuous		Active	98%
Sandpoint USFS	R&P 1400A TEOM PM2.5	Continuous		Active	92%
Sandpoint USFS	R&P 1400AB TEOM PM10	Continuous		Active	96%
Porthill International Border Site	Radiance Research Nephelometer /wind speed & direction	Continuous	CRB Seasonal	Inactive	0%
Athol	Radiance Research Nephelometer	Continuous	Deployed late in the month.	Active	14%
Mt. Hall School	Radiance Research Nephelometer/ wind speed & direction	Continuous	CRB Seasonal	Active	99%
Garwood Elementary	Radiance Research Nephelometer	Continuous	Deployed late in the month.	Active	11%

During July, 13 of 17 active samplers achieved 75% or greater data completeness.

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AIR QUALITY INDEX

The air quality index is a tool used to convey information to the public regarding local levels of air pollution and the associated health concerns. These levels are depicted in the table below.

Air Quality Index (AQI): Particle/Ozone Pollution

Index Values	Levels of Health Concern	Cautionary Statements
0-50	Good	None
51-100	Moderate	Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.
101-150	Unhealthy for Sensitive Groups	People with heart or lung disease, older adults, and children should reduce prolonged or heavy exertion outdoors.
151-200	Unhealthy	People with heart or lung disease, older adults, and children should avoid prolonged or heavy exertion outdoors. Everyone else should reduce prolonged or heavy exertion.
201-300	Very Unhealthy	People with heart or lung disease, older adults, and children should avoid all physical activity outdoors. Everyone else should avoid prolonged or heavy exertion.
301-500	Hazardous	People with heart or lung disease, older adults, and children should remain indoors and keep activity levels low. Everyone else should avoid all physical activity outdoors.

Below is a table showing the total weekday Air Quality Index (AQI) values for each of the reporting cities located in North Idaho for this reporting month. Differences in totals were due to sampler down time.

July 2011

Coeur d'Alene	Pinehurst	Sandpoint	St. Maries
Green = 20	Green = 20	Green = 20	Green = 20
Yellow = 0	Yellow = 0	Yellow = 0	Yellow = 0
Orange = 0	Orange = 0	Orange = 0	Orange = 0

2011 YEAR TO DATE AQI TOTALS

Coeur d'Alene	Pinehurst	Sandpoint	St. Maries
Green = 145(100%)	Green = 118 (83%)	Green = 146(100%)	Green = 139 (99%)
Yellow = 0	Yellow = 23 (16%)	Yellow = 0	Yellow = 2 (1%)
Orange = 0	Orange = 2 (1%)	Orange = 0	Orange = 0

For further information about air quality in Idaho and the northwest region visit the following sites on the Internet or contact Ralph Paul, Coeur d'Alene Region Airshed Coordinator, at 208-769-1422.

<http://www.deq.idaho.gov/>

<http://www.deq.idaho.gov/daily-air-quality-reports-forecasts>

www.airnow.gov/index.cfm?action=airnow.fcsummary&stateid=16